

**IN THE CLAIMS:**

1. (Currently Amended) A method of searching in a set of objects a predetermined number of objects that are closest to an example, by utilizing a multilevel partition which has a tree-like structure comprising ~~node~~ nodes and leaves, the nodes containing elements representing classes of objects, and the leaves containing objects, said method comprising the execution of the following steps in a repetitive manner:

- ~~a step of~~ passing through said tree like structure starting from a node and going to the leaves by passing through the nodes whose representative elements are closest to the example, for selecting one or various leaves, ;
- ~~a step of~~ testing whether the number of selected leaves is lower than said predetermined number of objects, ; and
- ~~and,~~ if the number of selected leaves is lower than said predetermined number of objects, a new repetition of said steps starting from the brother node of the node passed through last, closest to said example, otherwise providing the selected leaves having said predetermined number of objects as an output being sufficiently close to a centroid of a class of objects.

2. (Currently Amended) A search method as claimed in claim 1, characterized in that the predetermined number of object is a multiple of a predetermined number of results, which ~~method comprises an additional selection step for~~ further comprises retaining from the selected leaves only a number of leaves equal to said predetermined number of results, the retained leaves being those that contain the objects closest to said example.

3. (Original) As search method as claimed in claim 1, characterized in that the step of passing through the tree-like structure comprises a test for verifying for each node passed through if the number of leaves connected to this node is lower than or equal to the number of objects to be selected, in which case the leaves connected to this node are selected directly without passing by an possible intermediate nodes.

4. (Previously presented) A search method as claimed in claim 1, characterized in that said objects are descriptions of video shots.

5. (Previously presented) A search method as claimed in claim 1, characterized in that said objects are MPEG-7 descriptions.

6. (Currently Amended) A search method as claimed in claim 1, characterized in that ~~the~~ a proximity of the representative elements or objects to the example searched for is determined by using a measure of similarity  $f$  which is the one that has been used for constructing the partition used and which verifies the following properties:

- $f$  is an application which associates a real number with two data of the initial set  $T$  ;
- this real number is identical whatever the order of the two data  $T$  ; and
- this real number associated with two identical data is higher than the real number associated with two different data.

7. (Currently Amended) A computer program on a computer-readable medium containing code for performing a method of searching in a set of objects a predetermined

number of objects that are closest to an example, by utilizing a multilevel partition which has a tree-like structure comprising nodes and leaves, the nodes containing elements representing classes of objects, and the leaves containing objects, said program comprising:

~~means for implementing a search method as claimed in claim 1.~~

code for passing through said tree like structure starting from a node and going to the leaves by passing though the nodes whose representative elements are closest to the example, for selecting one or various leaves;

code for testing whether the number of selected leaves is lower than said predetermined number of objects; and

code for determining if the number of selected leaves is lower than said predetermined number of objects, a new repetition of said steps starting from the brother node of the node passed through last, closest to said example, and code for providing the selected leaves having said predetermined number of objects as an output being sufficiently close to a centroid of a class of objects.

8. (Currently Amended) ~~Equipment comprising means for implementing a search method as claimed in claim 1.~~

A hierarchical search apparatus, comprising:

video capturing means;

a first memory for storing data;

a second memory for storing computer-executable code;

a microprocessor in communication with the video capturing means and the first memory and second memory, said microprocessor being adapted for executing the computer-executable code in the second memory;

wherein the data in the first memory comprises descriptions of metadata video shots captured by the video capturing means;

wherein the second memory comprises means for coding a video captured by the video capturing means and means for multilevel partitioning of a set of descriptions of various metadata video shots obtained from said first memory; and means for searching in a tree-like structure comprising the various metadata video shot descriptions.

9. (Currently Amended) A transmission system ~~comprising including at least equipment as claimed in claim 8 the~~

hierarchical search apparatus according to claim 8, said  
transmission system further comprising:

the hierarchical search apparatus being adapted  
for transmission to/from the search apparatus;

a data source adapted for transmission to/from the  
data source; and

a transmission medium adapted for providing at  
least a transmission path between the search apparatus and  
the data source.